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A Theory of Complementary Duality in the Study of Animal Psychology in Africa

Augustine Nwoye^{1*} 

¹Professor, Discipline of Psychology, University of KwaZulu-Natal, Pietermaritzburg, 3201, South Africa. E-mail: nwoyea@ukzn.ac.za

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Abstract

This article makes the case for recognizing African insights about animals, particularly as they pertain to psychological knowledge. A theory of complementary duality is proposed to account for the co-presence in contemporary Africa, of theories of animal behavior arising from the experimental laboratory procedure alongside those derived from the indigenous observational approach. What is clear from the article is that Western approaches to the study of animals in Africa largely rely on laboratory studies while the indigenous African approaches rely on observation of these animals in their natural environments. The main contribution of the article is the understanding that knowledges gained about African animals through the open field observational approach provide a richer range of insights about human abilities and behavior than what has ever been achieved through the avenue of Western study of laboratory animals.

Keywords: *Animal Psychology in Africa, Laboratory approaches to animal studies, Observational approaches to animal studies, Hermeneutic phenomenology, Theory of complementary duality, Ethology*

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1. Introduction

This article has been written against the background of the current lack of attention in research and writings given to the African indigenous approach to the study of animal psychology in Africa. The article regrets the dominance of studies on animal behavior in Africa undertaken largely by foreign investigators. Among such foreign researchers are, in particular, those from the fields of ethology and ecology, majority of them from Europe, North America, and Asia, who employ the technique of observation or quasi experimental design as a method of their field study of target African animals such as the chimpanzees found in countries like Tanzania and Uganda, both from East Africa (Bakuza, 2006; Gilby, 2006; Goodall, 1965, 1986 and 1990; Hunt, 1992; Hashimoto and Furuchi, 2005; Ndimuligo, 2007; Nakamura and Nishida, 2012) and African elephants found in Kenya (East Africa) (Bax and Sheldrick, 1963) as well as in Southern Africa (Wood *et al.*, 2022; Bates *et al.*, 2008; Chamailé-Jammes *et al.*, 2007; Chamailé-Jammes *et al.*, 2013; Garstang *et al.*, 2014;

* Corresponding author: Augustine Nwoye, Professor, Discipline of Psychology, University of KwaZulu-Natal, Pietermaritzburg, 3201, South Africa. E-mail: nwoyea@ukzn.ac.za

Polansky *et al.*, 2015; Presotto *et al.*, 2019; Ramey *et al.*, 2013; Schmitt *et al.*, 2018; Shoshani and Foley, 2000; Tsalyuk *et al.*, 2019; Valenta *et al.*, 2021).

Western psychological approaches, some of these organized by White African scholars from universities in Africa that explore the knowledge of animals and their behavior in laboratory studies (Dawkins, 2007; McMillan, 2005; Rachman, 2009; Wilson, 2002; Wolpe, 1958; Wolpe, 1969; Wolpe and Turkat, 1985; Wolpe and Lazarus, 1999; von Dürckheim *et al.*, 2018) are also available; with all of them showing that African animal psychology has for several years been a subject of academic scholarship.

Unfortunately, this trend has entailed the inadvertent exclusion of local studies and writings interested in the idea of learning from the insights of African approaches to the study of animals in Africa. The author argues that if this status quo is left unchallenged then the insights (including knowledge of the innate reaction patterns, problem solving, animal thinking and strategic security management capabilities of these animals) arising from African approaches to the study of ordinary African animals in their natural environments will remain unexplored and unknown. But this will be regrettable given the current urge in our continent for the decolonization of our worlds and for the promotion of decolonial knowledge of ourselves by ourselves (Katele, 2017; Nwoye, 2022) including the need to rediscover our own voice, within this season of the postcolonial dispensation, in speaking to the world.

This article makes the case for recognizing African insights about animals, particularly as they pertain to psychological knowledge. The article proposes the existence of the phenomenon of complementary duality in the study and understanding of animal behavior in Africa. This entails the understanding that within the contemporary African context there is a co-presence consisting of the Western psychological approaches that utilize animals in laboratory studies (Dawkins, 2007; McMillan, 2005; Rachman, 2009; Wilson, 2002; Wolpe, 1958; Wolpe, 1969; Wolpe and Turkat, 1985; Wolpe and Lazarus, 1999) and the Indigenous African and the Western approaches generally that rely on careful and systematic observation of African animals in their natural environments (Bakuza, 2006; DeVore, 1965; Egerton, 2016; Evans, 1975; Gilby, 2006; Hashimoto and Furuichi, 2005; McLeod, 2018; Nishida *et al.*, 1983; Goodall, 1965, 1986 and 1990; Wilson *et al.*, 2004). In working out the article the author is aware that throughout Africa there is a rich tradition of animal observation both in indigenous Africa and the disciplines of psychology and other disciplines adjacent to psychology operating in contemporary Africa (e.g., ethology, ecology and evolutionary biology, with particular reference to Darwinian approaches and even the work of Konrad Lorenz (although some of his findings have now been disputed).

The main thrust of this article hinges on the argument that Western psychological approaches to the study of animals rely more on laboratory studies than the indigenous African approach that relies on observation of animals in their natural environments. The main contribution of the article lies in its proposition that knowledge about animals in Africa generated through Indigenous African approaches have the potential to provide a richer range of insights about human abilities and behavior when compared to related insights provided from knowledge of African animals derived from Western laboratory procedures.

Having said this, a clarification of the elements of the indigenous methodology for the study of animals in Africa is presented below.

2. The Indigenous Methodology for Animal Study in Africa

The indigenous methodology for the study of animals in Africa refers to the 'natural laboratory' procedure or the *open field research approach* that the rural people in Africa rely on in their study of animals in Africa. This means that the open field research approach to the study of the life and psychology of animals in Africa is the procedure through which the indigenous people of Africa were able to systematically explore and gain reliable knowledge about the behavior and movements of African animals in their *natural habitats*. That is, in the open savannahs and forests of Africa. Indigenous African peoples' knowledge about the security consciousness and behavioral tendencies, and the general orientation of various animals in Africa (the tortoise, the ram, the giraffe, the bull, the elephant, the lion, the cockerel, the eagle, the rabbit, the cat, etc.), as well as those of the dangerous animals in their wilds such as the snakes of different kinds, derive from the peoples' *systematic field observation* of these animals in their natural habitats. Through the people's sustained study of these animals Africans right from antiquity learned important principles for facing life and improving human relationships and a gist of these learning are codified in oral traditions of the different ethnic communities in Africa (Obiechina, 1975).

No wonder why oral traditions, as highlighted in the article, *Teach Africa: The oral traditions of Africa*, published by the World Affairs Council of Houston (n.d.) “are (said to be) messages that are transmitted orally from one generation to another. The messages may be passed down through speech or song and may take the form of folktales and fables, epic histories and narrations, proverbs or sayings. Oral Traditions make it possible for a society to pass knowledge across generations without writing (p. 1).” In present day Africa some of these oral traditions have been written down in form of books or incorporated in some rural African novels like those written by Achebe (1958 and 1964) and wa Thiong’o (1964, 1965 and 1967) and so many others. Some of the data on animal behavior reported here are gathered through oral transmission in form of stories about behavior of the animals consist of local stories circulating in the communities.

3. Purpose of the Article

What the author plans to do in this article specifically is to formulate and develop a coherent account of how indigenous approach to animal study in Africa is practically realized. This is an important undertaking given the primacy, though not the exclusivity, of this approach to the study of animals as an indigenous way of knowledge. In accomplishing this task, the discussion will be grounded, through the use of the library research approach, on the framework and concepts derived from the theory of hermeneutic phenomenology. Hence, an attempt will first be made to clarify the aspects of hermeneutic phenomenology that undergird the key elements of the practice of the indigenous, non-artificial/restrictive environmental study of animals in Africa.

The hermeneutic phenomenology framework that is relevant to this article is considered appropriate in this discussion not because it is a popular or well-known framework in Western psychology but because as mentioned in one article by Nwoye (2006) “the African universe is not an Aristotelian universe but essentially an interpreted universe” (p. 135), in which people react to what things/individuals mean to them rather than what these things/individuals are in themselves.

And so, what is Hermeneutic Phenomenology as applied to animal study in Africa?

Hermeneutic phenomenology, particularly as understood in this article refers to the model for understanding the lifeworld or the world as experienced by people inaugurated by Husserl (1931), elaborated by Heidegger (1962 and 1967), appropriated by Gadamer (1989) and reworked by Ricoeur (1981) as cited in Tan *et al.* (2009). Such a model forms the critical theoretical foundation on which this article is erected. This is because, some important concepts from the field of hermeneutic phenomenology that are of interest for the effective understanding of the discourse presented in this article include the notions of the *lifeworld* and the principle of *phenomenological reduction* or the need “to set aside all previous habits of thought, to break down the mental barriers which these habits have set along the horizons of our thinking ... to learn to see what stands before our eyes (Husserl, 1931, p. 43). This is the process that has become known as *bracketing* in Husserlian terminology.

Other hermeneutic phenomenological concepts of interest in this article are Heidegger’s emphases on the notion of the human being as a *being-in-the world*; and his stress on the meaning of phenomenology as connoting the idea of “let(ting) that (in the context of the present discussion, the animal behavior in the African wild) which shows itself be seen from itself in the way in which it shows itself from itself” (1962, p. 56); and his view of *life* (or in the context of the present discussion, animal life and behavior) *as a text*. To these are to be added Gadamer’s view of human beings as heirs to *cultural tradition*, the source of our language of discourse; as well as his perspective that the interaction between researcher and participant (or in the context of the present article, animal patterns and behaviors and their rural African human observers) as a *contact discourse*, and hence that interpretation implicated in such a discourse is a collaborative process that entails the fusion of horizons. Hence an important principle embraced in this article is the view credited to Gadamer (1989), a well-known student of Heidegger that our understanding of our environment is continually expanding as we expose it to *dialogue* with nature or in the context of the present article, the lived experience of the animals in Africa.

Another important hermeneutic phenomenological concept to be mentioned which is of relevance for effective understanding of the present article is the notion of the existence of mutual affinity between hermeneutics and phenomenology as elaborated by Ricoeur (1981). Here, the most important concept of his (Ricoeur’s) hermeneutic phenomenology of interest in this article is his *theory of text and distanciation* (1981) as outlined in Tan *et al.* (2009). In that theory, Ricoeur’s postulate of interest in this article is his view that “text is discourse fixed in writing (p. 145); and that text displays “a fundamental characteristic of the historicity of human experience, namely that it is communication

in and through distance” (p. 130). Applied to the present discussion most of the texts about animal life and behavior highlighted in this article came from African cultural tradition and folklore all of which are samples of communication in and through distance as highlighted above by Ricoeur.

Still another critical concept arising from Ricoeur’s theory of phenomenology of interest in this article is his concept of *appropriation*. Understood in the context of this article, the notion of appropriation is taken to mean that in their study of the animals of their world with a view to understanding the way of life of these animals, rural Africans do so not merely for academic purposes or knowledge for knowledge sake, but for purposes of appropriating the insights they learn from the actions and behaviors of these animals for influencing and improving their own life as humans in the world. Hence, for Ricoeur, appropriation means “to make one’s own what was initially alien” (p. 185).

4. Case Study Account of Animal Observations in Africa

The following three accounts derived from African oral heritage or folklore [see Achebe, 1958 and 1964; wa Thiong’o, 1964, 1965 and 1967; Obiechina, 1975] codified in the cultural traditions of the different ethnic communities in many parts of Africa that reflect the kind of knowledge which native Africans have accumulated from their sustained observation of the life and psychology of African animals will now be presented. The first of these accounts concerns the case about the life and psychology of African *Rabbit*, popularly known in East Africa (such as in Kenya and Tanzania) by its Swahili name, *Sungura*. The second is the case study of the cockerel popularly known in Kenya and Tanzania, all in East Africa, as *Jogoo*. And the third animal account to be presented is that of the cat (also known as *Paka* in Swahili).

4.1. The Case of the *Sungura* (Rabbit)

In rural Africa, the open field research account which indigenous/rural Africans have about the behavioral patterns of the *sungura* or rabbit is not acquired while the animal moves about ordinarily in the wild. For, essentially, it is an animal that lives in the underground hole it fashions for itself. The knowledge which Africans have of the rabbit is acquired in the course of its being hunted and disturbed in its ‘underground residence’; under which circumstance it feels summoned to try and escape and protect its life. It is when under this threat that Indigenous/rural African observers hunting it discover the mettle of which the rabbit is made. What the African observers realize in that instance is that the rabbit has high innate intelligence for adversity management aimed at outwitting its predators, humans in particular. In this regard, its principal trick is to fashion out a disguised backdoor as an escape route when under deadly pursuit. In this context, the most important revelation that indigenous Africans discover is the enormous distance that exists between its undisguised front door, or its hole’s ‘starting point, and the safety-related backdoor it forges for manipulating its escape from predators. This distance, in some cases, is in the region of 15 meters apart, and the amazing thing about it is that it is through the skillful burrowing process that the route to this security escape door is made, with the entire route from the front door (hole) all through to the backdoor, taking something like a descending-ascending structure. From the ground at the start of the front door there is a descending burrowing towards the floor or the base of the hole where it lives; and from that base it burrows upwards ascending to meet the escape ground at the backdoor, with the hole at the backdoor opening itself barely noticeably from the ground, and the thin layer of land that stays level with ordinary ground around the mouth of this disguised escape door being held in place so skillfully in such a way that a forceful kicking of it from underneath by the rabbit on its way out of the threat facing it from the front door (or hole) can yield easily when kicked with its head. Rural Africans that are familiar with the behavior of such rabbits are aware that on several instances, the rabbit is able to escape unhurt through this process. It is only when its human predators acting from their oral heritage and fore-knowledge (all a product of cultural tradition) about the adversity management strategy of the rabbit, such that those pursuing it are aware that it has a tendency to establish two doors (or hole points) and able to search for and find that escape hole, and block it with some smoky firewood before starting their pursuit of the rabbit from the front hole, could the rabbit be closed in and captured and killed. Otherwise, in many instances, the threatened rabbit is able to manipulate its way out of the impending danger.

Based on the above episodic knowledge there is codified in the corpus of African oral heritage or folklore (Achebe, 1958 and 1964; wa Thiong’o, 1964, 1965 and 1967; Obiechina, 1975) an understanding that:

1. Rabbits are very clever animals endowed with high capacity for adversity management in their lifeworld.
2. Rabbits are security conscious animals imbued with the capacity to anticipate man-made threats and snares to their

environment, and has the high adversity management intelligence to recognize the need for the creation of a make shift door for purposes of escaping from threats in their lives.

- Hence, that just as humans see the need for the front and backdoors in their architecture, rabbits are endowed with the innate intelligence to do the same in terms of having a plan B procedure, in its habitat management acumen.

The above indications mean that even before George Kelly's (1955) principle of *constructive alternativism* came into being, rabbits in rural Africa have this principle inbuilt in their 'cognitive' equipment. In this way, rural Africans learned that to succeed in closing in and defeating a rabbit resting in its underground 'residence', something more than just digging through its observable front door hole is required. To succeed in capturing it, its escape hole, 'its backdoor provision', must first be found and blocked before the digging to close in on it could start. Consequently, one cannot but conclude that some animals such as the rural African rabbit are capable, like humans, of forming a sophisticated 'imaginative' representation of the world; including the notion of *consequence anticipation*, and the sense of the world as a *precarious* environment that requires the introduction of care and disguise in whatever it is they do. But it needs to be mentioned that these interpretations are not given directly to indigenous or rural Africans by the rabbit. Rather such interpretations are consistent with the point made by Bruner (1973, 1986 and 1978) that humans are by nature oriented to *constructing meaning* out of the little details in their dialogue with life (or in the context of this discussion, the behavioral pattern of the *sungura or rabbit*).

4.2. *The Case of the Cockerel or the Jogoo*

One of the animals in rural Africa, whose image is often used as a symbol for articulating the political philosophy of many political parties in Africa, from Zik's (Azikiwe's) NCNC party in Nigeria in the 1960s to the Jogoo (cockerel) symbolism of the KANU, the national party of Kenya during the presidency of Jomo Kenyatta and his successor Mr Daniel arap Moi. In this regard, the key question then becomes how has the rural African cockerel acquired such a commanding position of respect and reputation in African peoples' view of things? The account below gives a little glimpse of why this is so.

And the answer is because unlike the rabbit that lives in the wild, the cockerel and other chickens are animals of the home. Africans rear or keep them for essentially economic purposes. They build a small shelter for them to protect them from the menace of the weather and other predators (like snakes). And these cockerels in turn rise from that shelter every morning to go out searching for their own food and return to the same shelter later on in the evening when the sun sets.

Being a domestic animal sharing the same compound or outdoor space with their human owners, they are always within close observation of the human members of the compound in which they live. Being that close at hand in this way native Africans have the daily opportunity for the continuous observation of them. Through this intensive and sustained observation of the cockerel, for example, native rural Africans get to establish some important facts about the patterns and behaviors of the cockerel. Among those are the following:

- 'A family owns a cock, but the community owns its voice' (Ezeliora, 2008, p. 97).
- The cock serves as the time keeper for the community, urging them to gauge when to rise for the early start of the day.
- Cocks operate as "the harbinger of a new life" and "the call of a new dawn." According to the African tradition, the rooster is the only domestic fowl that announces the dawn of a new day (more like the alarm clock—the wake-up call), which is another the reason why the rural Africans keep them.
- Cocks have dependable consistency in announcing the dawn of the new day, marked by its first and second crows.
- They are known for their forward thrust orientation and an inability to retrocede. This means that the cockerel or the rooster is noted as one of the few animals that seldom move backwards or betray their principle of upward thrust.
- Cocks are perceived as organized animals, disciplined and unfailing in their rhythmic call of a new dawn.

Again, these knowledges or conclusions or social facts about the cockerel are a type of contact discourse (Gadamer, 1989) or products of interpretation (Bruner, 1986) which rural Africans make out of their dialogue and close contact with the cockerels in their world.

4.3. *The Case of the Cat*

The cat, also known as paka in Swahili, is recognized in indigenous Africa both as a domestic animal and of the wild. But their field study and report of the behavior of the cat as presented in this discussion is with particular reference to African

cats as domestic animals. When living out their lives as domestic animals, in close contact with humans, the patterns and psychology of the cat is well observed and predictable by indigenous Africans. Their sustained observation of the behavior of cats around their homes helps them to discover some important principles that organize the life of the cat.

The first of these is the principle of subtlety and the ability to work with the spirit of reconnoitering of the environment in their world of uncertainty and ambiguity. The second is the principle of decency. A close and sustained observation of the domestic cat in Africa shows that unlike the goat or the chicken that defecate wherever they are standing, oblivious of context or ‘discipline’, native Africans learn from the cat that there is nobility in managing even ordinary routines of life, such as in responding to the call of nature; and that one does not need to wash one’s dirty leanings in public by defecating in the open field. Indigenous Africans arrived at these conclusions from their close observation of the life and behavior of the cat in their surroundings. Through such observations they discover that the cat goes into hiding when answering the call of nature, and does not even leave without covering its excrement, the outcome of its defecation. It tries to cover it with sand or whatever, after the exercise. All these suggest the psychology of the cat as an animal that foreshadows the value of the use of latrine or the toilet system among modern human beings.

Based on these revelations indigenous Africans come to the following understanding and interpretation of the behavioral patterns of domestic cats in their world:

1. The cat is an animal that is sensitive to order and integrity; ruled by the principle of decency;
2. The cat lives by the principle of opacity in their day to day dealings with their uncertain and precarious surroundings.

Again, like in the case of the sungura and the cockerel, these interpretations are read into the observed behavioral scripts of the cat and not through direct dialogue or communication with the cat itself. They arise from African interpretations of (Bruner, 1973, 1986 and 1978) or inferences (Dawkins, 2007) from their observations of the behavior of the cat in their world.

5. Acknowledgement of Sources for the Above Case Studies

Of course, although it is to be acknowledged that the sources of knowledge for each of the above case studies came from conversations with local communities, yet some written sources also do exist on the sediments of wisdom derived from African people’s sustained observation of animals in their worlds. Thus, as Nwoye (2017) has indicated, in most ethnic and indigenous communities in Africa, such as among the Igbo of Nigeria, there are usually popular narrative proverbs which carry some great moral lesson for the psychological development of children. The theme of such narrative proverbs, handed down from generation to generation in form of a myth is the importance of good use of silence noted among the animal world in their environment. In this regard, among the Igbo, one such myth carries the title “Why hawks eat chicks rather than ducklings” (Obiechina, 1993). And one version of the full text of such a myth, as reported by Achebe (1958, p. 98), in his classic novel, *Things fall apart* reads as follows:

“Mother Kite once sent her daughter to bring food. She went, and brought back a duckling. ‘You have done very well’, said Mother Kite to her daughter; ‘but tell me, what did the mother of this duckling say when you swooped and carried its child away?’ ‘It said nothing’, replied the young kite. ‘It just walked away’. ‘You must return the duckling’, said Mother Kite. ‘There is something ominous behind the silence’. And so Daughter Kite returned the duckling and took a chick instead. ‘What did the mother of this chick do?’ asked the old kite. ‘It cried and raved and cursed me’, said the young kite. ‘Then we can eat the chick’, said her mother. ‘There is nothing to fear from someone who shouts’.”

Such a narrative proverb codified in the African folklore demonstrates that in Africa as in other regions of the world, there is a moral vision that when we are tactless and talk too much in life, the result might be disastrous, just as it turned out to be the case in the life of the mother-hen.

6. Meanings Generated through African Approaches to the Study of Animals

Having gone thus far the stage is now set to discuss and see together what we have learnt about indigenous African people’s study of animals in their world through the application of the *open field study* methodology. Here it is important to remind the reader that because African psychology as understood currently in continental Africa came into being not only to argue against but also to partner with Western psychology imported to Africa (Nwoye, 2017) in the production of psychological knowledge in African universities, there is no question of whether the insights of African approaches

to the study of African animals should be “subordinated” to existing Western findings, in the sense that it might be more powerful to allow the African approaches their own prominence by explicating the epistemological framework they are based on, rather than translating it into Western epistemologies. Having made this caveat, a thematic approach will now be followed in highlighting these meanings derived from the field observation of animals in Africa.

6.1. Animal Study in Africa and the Phenomenon of Generative Grammar

Under this theme, the point to be developed is the view that the meanings which indigenous African people draw in their field observation of animals in Africa arise from what they read into what they have observed about these animals and the way they carry themselves along in their natural surroundings. Understood in this way, what is argued here is that African students of animal psychology in Africa gain access to their knowledge of these animals not through direct conversation with these animals but as a result of observing the way of life of these animals in the natural world of these same animals. This means that they derive their knowledge of these animals through the phenomenon of *sensory knowing* and the *capacity to go beyond the information given* (Bruner, 1986). Hence it can be said that one of the meanings generated by African (indigenous) students of animal psychology in Africa derive from their systematic study of the behavior of animals in Africa is a true example of what one can refer to as *suggestive learning or a generative grammar or a speech text that means more than it says*.

Similarly, the fact that indigenous Africans construct important principles by which to live from their study of these animals lends support to the point made by Ricoeur (1981) that the phenomenon of *appropriation* is part and parcel of human beings’ approach to the world and the texts of the world before them. Thus, defining the word *appropriation* in this regard, Ricoeur (1981) remarks that by ‘appropriation’ is to be understood as the fact that “interpretation of a text culminates in the self-interpretation of a subject (the interpreter) who thenceforth understands himself better, understands himself differently, or simply begins to understand himself” (p. 159). In the context of the present discussion, this means that the yields of the study of animal psychology in Africa through the indigenous approach are not just for academic purposes but most importantly for the lessons they draw from what these knowledges mean to them for the improvement of human understanding and relationships.

For example, African parents use the principles derived from such animal studies to inspire their children to better behavior. Thus, in teaching the virtue of humility and the life of decency to their children they urge these children to draw inspiration and model their life from the patterns of the cat or even the little goat that is observed to suckle his mother’s breasts on bended knees.

6.2. Relevant Epistemologies for Animal Field Study in Africa

From the perspective of epistemology, one can say that the field study of animal behavior in Africa is grounded on a number of pertinent epistemologies such as: *Empiricism; Phenomenology; Existentialism; Spectator/Extrapolative Epistemology; and the notion of Truth in Action*. What is entailed in each of these constructs is briefly clarified below as follows:

6.2.1. Empiricism/Evocationalism

Here, the crucial point to make is that people’s field knowledge of animal behavior in Africa arises from what people *see* these animals *do* within their (animals’) real conditions of existence; that is, from the people’s systematic observation of the animals’ patterns and behaviors within the ordinary world of these animals. Thus, the indigenous field study of animal psychology in traditional Africa involves the study of animal behavior in field settings which gives rise to *evocational thoughts* in those observing them. In this way, Africans in their field observation of animal behavior in Africa employ in their meaning-making process, the *syntax of prose and text* to give expression to complex meaning reflected in the activities and mannerisms of these animals.

6.2.2. Interactive/Interpretative Phenomenology

Another meaningful theme that emerges from the indigenous approach to the study of animals in Africa is the fact that indigenous African peoples *do not react passively* to their field observations of animal behavior patterns and presentations in Africa. They interpret and attach meanings to them (Bruner, 1978 and 1986; Ricoeur, 1981). In this way, animal behaviors and patterns receive a new *incarnation in human language*, and are read as *episodes that connect*, and understood as having lessons to convey to humans for living in the human world. This means that in their sustained observation of animal behavior in their rural environment, indigenous Africans recognize some traces of insight in the

patterns and orientations of these animals. Hence African people's knowledge of animal behavior in Africa is based, essentially, on a kind of *spectator/inferential knowing, pattern recognition, and intuitive and empathetic learning*. All these expressions connote the condition of the *total observer involvement* giving rise to a process of knowledge that is interactive/constructive rather than from direct analysis of data of animal responses in the face of artificial obstacles set to them in the manner of experimental methodology within the context of an institutional laboratory, as found in the animal study approach of members of the psychology and other related disciplines.

6.2.3. *Hermeneutics and the Notion of Animal Behavior as a Text to be Read and Understood*

Again from the indigenous observational approach to the study of animal behavior in Africa, it has been discovered that actions of domestic and wild animals in Africa stand like a *text to be read and understood* by those in contact with these animals. In this way, the truth and meaning which African people derive from their study of animal psychology in Africa come from gazing at the ordinary life behaviors of these animals as they (the animals) live their lives in the open wild world. And, big or small, these animals everyday stand naked before the mirror of the people's eyes, with some lessons to teach them (African people) on how they (the animals) are managing the challenges of their precarious world of the wild, woods and forests. The result is a *reflective understanding*, on the people's part. In African animal psychology, in other words, the understanding is that the action of an animal is always seen in terms of the particular horizon of the interpreter and his or her capacity to go beyond the literal presentation of the observed animal's behavior (Bruner, 1986; Dawkins, 2007).

6.2.4. *Existentialism and the Human Quality of Being-in-the-World*

Effective field observations of animal patterns and behaviors in the wild in Africa is grounded on the belief that we can learn a lot from the animals that populate the rural African world in *being-with them*; that is, in being in contact with what they do in their world, and therefore in *reading the open book* of their behaviors and actions in their habitats in the African world, and drawing important meaning by which to live, from them. This is especially true with the result of the field observation of the rabbit and the cat as highlighted earlier in this discussion.

6.2.5. *The Notion Truth in Action*

Finally, the central notion that undergirds the study of animal patterns and psychology in Africa is that *we know what we are through what we do or can do*. This means that we could only know what animals in the African world are by observing what they do and can do in their natural world. In this way, we learn to develop our personality by drawing insights from the behaviors and patterns of the honoric animals in traditional Africa (Ricoeur, 1981). For after keen observations of the patterns of these animals indigenous Africans, consistent with Ricoeur's principle of appropriation, depart with something to take home: a lesson for living!

7. The Theory of Animal Behavior as a Text

The above clarifications are important in highlighting the gains that Africans derive in the field study of animal behaviour in their world. They suggest that the strengths of the indigenous approaches to the study of animals in Africa cannot be fully appreciated without the notion of animal behavior as a text being assumed. For it needs to be remembered that animal patterns and behavioral manifestations in rural Africa thrown open to the systematic gaze or observation of the typical native Africans come with insight and learning about the nature and 'intentionality' of these animals. But this is only so when such behavioral outputs are perceived as 'texts' in need of (human) interpretation and understanding by the on-looking rural Africans. This is another way of saying that the understanding and insight that ancient and rural Africans have of the behavior of animals in their world, do not come directly from the *voice* of these animals since these animals cannot communicate their thoughts and intentions directly through a language that humans can understand. At the same time what is argued in this discussion is not that the lives of animals in Africa only have meaning when humans observe and learn from them. What is argued rather is that the meaning of animal behavior in Africa are first seen by their human observers as texts pregnant with meaning.

Consequently, what the philosophies of Gadamer and Ricoeur teach in this regard is that African interpretation of animal behaviors as texts pregnant with meaning can only be facilitated and shared when those behavioral outputs of animals in the African wild are first recreated as texts rendered into *language* as suggested by the *cultural tradition* into which the (human) observers and interpreters of these animals have been inducted. Through their systematic and sustained observation of the behaviors of these animals, there occurs, according to Gadamer (1989) a fusion of the

horizons of these animals and their human observers. Through this fusion, the human observers are able to process and interpret, through the phenomenon of translation, the meaning read into the behavioral output of these animals from the perspective of human (or in this context of this article, African) culture and thought.

The implication of this is that, in the context of the indigenous African people's observational study of the animals in their natural settings, it is not possible to entirely recreate in the form of a text the detailed episodic manifestations produced by the animals acting naturally in their own *lifeworld*. The surplus meaning to be derived from the discrete manifestations of the patterns of these animals must be augmented through their reading of meaning into the behavior of these animals. And here lies the strengths of these indigenous approaches to the study of animals in Africa.

8. Observational Study of Animals in Psychology and Western Approaches Generally: A Comparative Perspective

This article has attempted to demonstrate that in the African context two principal approaches to the study of animals do exist and complement one another: the open field research perspective and the animal laboratory study approach made popular by Joseph Wolpe; who, while at the University of Witwatersrand in South Africa, made important pioneering contributions to the early development of behavior therapy during the 1950s. Similarly, the learnings derived from observational study of animals in Africa through the indigenous approaches are in concord with the kind of effort made in the fields of ethology, ecology and evolutionary biology, with particular reference to the work of the Austrian Zoologist and 1973 Nobel prize winner, Konrad Lorenz (even though some of his findings have now been disputed). In consonance with the effort of indigenous approaches to the study of animal behavior in Africa, findings from these adjacent fields of psychology show that a lot can be learnt about animal behaviors in our world through the use of the observational methodology. Konrad Lorenz, for example, is best known for his discovery of the principle of attachment, or imprinting, through which in some species a bond is formed between a new born animal and its caregiver (McLeod, 2018; Evans, 1975). Similarly, like *the principle of attachment or imprinting* discovered by Lorenz (McLeod, 2018; Evans, 1975) through the observational study of the geese, so too are the principles of *subtlety* and *opacity*, and the ability to work with the spirit of reconnoitring of the environment in their world of uncertainty and ambiguity found through the observational study of the cats in their world by indigenous Africans.

Thus, although less studied or rarely acknowledged by many psychology students and scholars in Africa, the indigenous *open field research perspective*, deserve more attention by scholars in African psychology. This is because the use of the open wild of many villages and suburbs in Africa as a setting for drawing of people's knowledge about the behavior and way of life of some honorific animals in Africa (the tortoise, the ram, the bull, the cockerel, the giraffe, the elephant, the lion, the leopard, the eagle, the rabbit, etc.) is similar to the observational work done of animals in the natural environments practitioners of other approaches that use naturalistic study of animals such as the discipline of ethology, and the associated German journal, *Zeitschrift fur Tierpsychologie*, which was established in 1937 and published many naturalistic studies conducted in Africa, such as in Gombe and Mahale, Tanzania (Bakuza, 2006; Gilby, 2006; Goodall, 1965, 1986 and 1990; Hunt, 1992; Nakamura and Nishida, 2012; Wilson *et al.*, 2004; Kalinzu Forest, Uganda Hashimoto and Furuichi, 2005).

9. Insightful Conclusions

Before bringing this discussion to a close the following range of higher insights about human abilities and behavior arising from the indigenous approaches to the study of animal psychology in Africa can be highlighted. Among these are the following:

1. Humans, like many animals such as the rural rabbit in the African environment, have innate ability for adversity management.
2. Humans, like the Sungura or the rabbit and the cat, are security conscious animals imbued with the capacity to anticipate enemy threats and snares in their environment. This behavioral trait is reflected in the context of human architecture in which through their high adversity intelligence humans, similar to the behavior of the sungura are able to recognize the need for the creation of a backdoor as a constructive alternative road of escape when their lives are threatened from the main or front-door.

3. Humans are capable, like the rabbits and cats do, of forming a sophisticated 'imaginative' representation of their world, including the notion of 'consequence anticipation', and the sense of their world as a precarious environment that calls for the application of care and the technique of disguise particularly in times of war or when dealing with people of uncertain motives.
4. Humans are by nature, oriented to constructing meaning (Bruner, 1986) or making inferences (Dawkins, 2007) out of the little details in their 'dialogue' with animals in their world.
5. Humans have the ability to engage in inductive reasoning; able to draw from limited evidence emerging from a given case, such as in the case of their knowledge of the behavioral pattern of the cockerel, the conclusion that: 'A family owns a cock, but the community owns its voice' (Ezeliora, 2008).
6. Humans are able to learn important moral principles from their close observational study of the animals in their world such as the cat and the chameleon. Among such principles are those of subtlety and opacity, which are called into action in their day to day dealings with the unpredictable events of their precarious surroundings.
7. In their search for meanings with the events in their environments, humans have the capacity to go beyond the information given, a point that corroborate the view propounded by Bruner (1986) to construct a meaning of the events presented in their environment.

10. Conclusion

These conclusions clearly suggest that it is not only through the use of the scientific laboratory procedure that animals can be systematically studied in search of insights for the understanding of the behavior of humans in the world. This article rather teaches that using an alternative epistemology that involved repeated and systematic observations of animals in their natural settings, thereafter codified in books of oral traditions and folklore; or incorporated as cultural texts, in African novels, people in Africa (like their counter parts in the global world), as conscious and reflective observers of both domestic and wild animals were able to learn so much about the psychology of these animals (including their way of life and 'intentionality'); generating important insights for understanding the higher functions of human beings as well as some important principles and metaphors by which humans live out their lives.

Declarations

The datasets used and/or analysed in the course of this theoretic review are available and drawn by the authors from the professional literature.

Competing Interests

The authors declare that they have no competing interests.

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Human and Animal Studies Procedures Followed

"All procedures followed were in accordance with the ethical standards of the responsible committee on human research (institutional and national) and with the Declaration of Helsinki's of 1975, as revised in 2008."

"All institutional and national guidelines for the care and use of laboratory animals were followed."

"After obtaining approval from the institutional ethical committee and an approval number, all animal investigations were carried out."

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